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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/612,701

07/02/2003

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EXAMINER

MAHMOOD, REZWANUL

ART UNIT

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2164

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/612,701	Applicant(s) PLATT, JAMES LEONARD	
	Examiner REZWANUL MAHMOOD	Art Unit 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,9-11,13 and 15-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,9-11,13 and 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the communication filed on July 20, 2008. Claims 1, 3-5, 7, 9-11, 13 and 15-17 are pending in this office action.

Response to Arguments

Applicant's arguments filed on July 20, 2008 have been fully considered but they are not persuasive for the following reasons:

Applicant argues that Weissman does not teach or even suggest the features "inferring from the schema dependencies among a fact table and related dimension tables, wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database" and that "the combination of Weissman and Veronese cannot be used to establish a prima facie case of obviousness against applicant's claims within the meaning of 35 U.S.C. § 103".

Examiner respectfully disagrees all of the allegations as argued. Examiner, in his previous office action, gave detail explanation of claimed limitation and pointed out exact locations in the cited prior art.

Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-1]

Interpretation of Claims-Broadest Reasonable Interpretation

During patent examination, the pending claims must be 'given the broadest

reasonable interpretation consistent with the specification.’ Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

Weissman teaches in Column 2 lines 26-38 and 66-67, Column 3 lines 1-2, Column 5 lines 26-32 a datamart having data that is organized according to a schema, the datamart including tables having rows and columns. The schema defines the relationships between the tables and columns which can be thought of as dependencies between the tables and columns as In Column 12 lines 24-40 Weissman discloses the tables sharing a parent child relationship wherein a second table points to the data of a first table. In Column 3 lines 1-2 and lines 36-38, Column 5 lines 26-32, Column 7 lines 23-49, and Column 10 lines 24-42 Weissman teaches generating and populating a datamart defined by the schema definitions, the schema description defining how a data is to be manipulated and used to populate tables in a datamart. The schema being a star schema which has one or more fact tables and one or more dimension tables wherein the schema defines the relationships between the tables and columns. The description is used to create a set of commands to create the tables. The description is further user to define the semantic meaning of the data. When the semantic meaning is associated with the column and rows, programs for manipulating and propagating data into those columns and rows are automatically defined. From the schema description, the system automatically builds the tables needed in the datamart. Therefore Weissman does disclose inferring from the schema dependencies among a fact table and related

dimension tables, wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database.

In response to applicant's argument on pages 15-16, *a prima facie case of obviousness* is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. Once such a case is established, it is incumbent upon appellant to go forward with objective evidence of unobviousness. In re Fielder, 471 F.2d 640, 176 USPQ 300 (CCPA 1973).

Weissman discloses inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42).

However, Weissman does not explicitly disclose:

inserting the expressions of dependencies into a dependency list.

The Veronese reference, however, discloses building a dependency list for the expressions of dependencies (Veronese: Paragraph 120, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Weissman with the teachings of Veronese to add a dependency list to insert the database expressions of dependencies to have new development methodologies, which will be both rapid and easily manageable and modifiable by the users (Veronese: Paragraph 11, lines 3-5) and to have an improved data warehousing technology (Weissman: Column 2, lines 61-62).

For the above reasons, Examiner believed that rejection of the last Office action was proper.

Claim Objections

Claim 1 is objected to because of the following informalities:

In claim 1 line 1, the phrase "A method" should be "A computer-implemented method". Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7, 9-11, 13, and 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman (US Patent 6,212,524) in view of Veronese (US Publication 2004/0210445).

With respect to claim 1, Weissman discloses a method for populating a database, the method comprising:

providing a database having a schema, wherein the schema defines tables in a database as well as fields in each table, relationships between fields and tables and dependencies among tables (Weissman: Column 2, lines 26-38 and 65-67; Column 3, lines 1-40; Column 5, lines 26-37; Here the schema defines the tables which also

contain fields or attributes, the relationship between the tables, and the link or dependencies between the tables);

inferring from the schema dependencies among a fact table and related dimension tables, wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in a database before a second record in a second table may be inserted in the database (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 6, lines 1-46; Column 7, lines 42-49; Column 10, lines 24-42; Here according to the schema definitions a dimension table links to the fact table which is the central table of the schema, so a fact table must exist first before a dimension table is generated), further comprising:

selecting from metadata describing a schema for the database expressions of dependencies (Weissman: Column 7, lines 23-49; Figure 1);

inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42).

However, Weissman does not explicitly disclose:

inserting the expressions of dependencies into a dependency list.

The Veronese reference, however, discloses building a dependency list for the expressions of dependencies (Veronese: Paragraph 120, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Weissman with the

teachings of Veronese to add a dependency list to insert the database expressions of dependencies to have new development methodologies, which will be both rapid and easily manageable and modifiable by the users (Veronese: Paragraph 11, lines 3-5) and to have an improved data warehousing technology (Weissman: Column 2, lines 61-62).

With respect to claim 7, Weissman discloses a system for populating a database, the system comprising a computer processor, a computer memory operatively coupled to the computer processor, the computer memory having disposed within its computer program instructions capable of:

providing a database having a schema, wherein the schema defines tables in a database as well as fields in each table, relationships between fields and tables, and dependencies among tables (Weissman: Column 2, lines 26-38 and 65-67; Column 3, lines 1-40; Column 5, lines 26-37; Here the schema defines the tables which also contain fields or attributes, the relationship between the tables, and the link or dependencies between the tables);

inferring from the schema dependencies among a fact table and related dimension tables, wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 6, lines 1-46; Column 7, lines 42-49; Column 10, lines 24-42; Here according to the schema definitions a dimension table links to the fact table which is the central table of

the schema, so a fact table must exist first before a dimension table is generated),
further comprising:

selecting from metadata describing a schema for the database expressions of dependencies (Weissman: Column 7, lines 23-49; Figure 1); and

inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42).

However, Weissman does not explicitly disclose:

inserting the expressions of dependencies into a dependency list.

The Veronese reference, however, discloses building a dependency list for the expressions of dependencies (Veronese: Paragraph 120, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Weissman with the teachings of Veronese to add a dependency list to insert the database expressions of dependencies to have new development methodologies, which will be both rapid and easily manageable and modifiable by the users (Veronese: Paragraph 11, lines 3-5) and to have an improved data warehousing technology (Weissman: Column 2, lines 61-62).

With respect to claim 13, Weissman discloses a computer program product for populating a database, the computer program product comprising:

a recording medium (Weissman: Figure 1);

means recorded on the recording medium, for providing a database having a schema, wherein the schema defines tables in a database as well as fields in each table, relationships between fields and tables, and dependencies among tables (Weissman: Column 2, lines 26-38 and 65-67; Column 3, lines 1-40; Column 5, lines 26-37; Here the schema defines the tables which also contain fields or attributes, the relationship between the tables, and the link or dependencies between the tables);

means, recorded on the recording medium, for inferring from the schema dependencies among a fact table and related dimension tables, wherein a dependency comprises a rule for the database, enforced by a database management system, that a first record in a first table must exist in the database before a second record in a second table may be inserted in the database (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 6, lines 1-46; Column 7, lines 42-49; Column 10, lines 24-42; Here according to the schema definitions a dimension table links to the fact table which is the central table of the schema, so a fact table must exist first before a dimension table is generated), further comprising:

means, recorded on the recording medium, for selecting from metadata describing a schema for the database expressions of dependencies (Weissman: Column 7, lines 23-49; Figure 1); and

means, recorded on the recording medium, for inserting, in accordance with the dependencies, rows of data into the fact table and rows of data into the dimension tables (Weissman: Column 3, lines 1-2 and lines 36-38; Column 5, lines 26-32; Column 7, lines 42-49; Column 10, lines 24-42).

However, Weissman does not explicitly disclose:

inserting the expressions of dependencies into a dependency list.

The Veronese reference, however, discloses building a dependency list for the expressions of dependencies (Veronese: Paragraph 120, lines 1-12).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Weissman with the teachings of Veronese to add a dependency list to insert the database expressions of dependencies to have new development methodologies, which will be both rapid and easily manageable and modifiable by the users (Veronese: Paragraph 11, lines 3-5) and to have an improved data warehousing technology (Weissman: Column 2, lines 61-62).

Claims 3-5, 9-11, and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman (US Patent 6,212,524) in view of Veronese (US Publication 2004/0210445) as applied to claims 1, 7, and 13 above, and further in view of Medicke (US Publication 2004/0236786).

With respect to claim 3, Weissman in view of Veronese discloses the method of claim 1, however, Weissman and Veronese do not explicitly disclose wherein inserting rows of data further comprises:

determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table;

for each foreign key for which related dimension data does not exist, inserting a

row of dimension data into a dimension table related to the fact table through the foreign key.

The Medicke reference, however, discloses determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table, and for each foreign key for which related dimension data does not exist, inserting a row of dimension data into a dimension table related to the fact table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to modify the teachings of Weissman and Veronese with the teachings of Medicke to determine if dimension data exists for each foreign key in the fact table and inserting such data if it did not exist for creation and maintenance of data warehouses (Medicke: Paragraph 1, lines 2-3).

With respect to claim 4, Weissman in view of Veronese and in further view of Medicke discloses the method of claim 1 wherein inserting rows of data further comprises:

determining whether related dimension data exists for each foreign key in each row inserted into a first dimension table (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, inserting a row of dimension data into a second dimension table related to the first dimension table

through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 5, Weissman in view of Veronese and in further view of Medicke discloses the method of claim 1 wherein inserting rows of data further comprises:

reading the rows of data from a first database, the first database comprising dependencies among tables in the database (Weissman: Column 9, lines 43-60); and

inserting rows of data into a second database, the second database comprising at least the same dependencies as in the first database (Weissman: Column 10, lines 23-57; Medicke: Figure 9).

With respect to claim 9, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein inserting rows of data further comprises:

determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, means for inserting a row of dimension data into a dimension table related to the fact table through

the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 10, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein inserting rows of data further comprises:

determining whether related dimension data exists for each foreign key in each row of data inserted into a first dimension table (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, inserting a row of dimension data into a second dimension table related to the first dimension table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 11, Weissman in view of Veronese and in further view of Medicke discloses the system of claim 7 wherein inserting rows of data further comprises:

reading the rows of data from a first database, the first database comprising dependencies among tables in the database (Weissman: Column 9, lines 43-60); and

inserting rows of data into a second database, the second database comprising at least the same dependencies as in the first database (Weissman: Column 10, lines 23-57; Medicke: Figure 9).

With respect to claim 15, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein means for inserting rows of data further comprises:

means, recorded on the recording medium, for determining whether related dimension data exists for each foreign key in each row of data inserted into the fact table (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; and

for each foreign key for which related dimension data does not exist, means recorded on the recording medium, for inserting a row of a dimension data into a dimension table related to the fact table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 16, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein means for inserting rows of data further comprises:

means, recorded on the recording medium, for determining whether related dimension data exists for each foreign key in each row of data inserted into a first

dimension table (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15); and

for each foreign key for which related dimension data does not exist, means, recorded on the recording medium, for inserting a row of dimension data into a second dimension table related to the first dimension table through the foreign key (Medicke: Paragraph 73, lines 10-27; Figure 7; Figure 9; Weissman: Column 13, lines 25-67; Column 14, lines 8-67; Column 15, lines 1-15; Column 37, lines 30-35).

With respect to claim 17, Weissman in view of Veronese and in further view of Medicke discloses the computer program product of claim 13 wherein means for inserting rows of data further comprises:

means, recorded on the recording medium, for reading the rows of data from a first database, the first database comprising dependencies among tables in the database (Weissman: Column 9, lines 43-60); and

means, recorded on the recording medium, for inserting rows of data into a second database, the second database comprising at least the same dependencies as in the first database (Weissman: Column 10, lines 23-57; Medicke: Figure 9).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REZWANUL MAHMOOD whose telephone number is (571)272-5625. The examiner can normally be reached on M - F 10 A.M. - 5 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571)272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. M./
Examiner, Art Unit 2164
October 8, 2008

/Shahid Al Alam/
Primary Examiner, Art Unit 2162